



## COURSE SYLLABUS

# Applied Web Architecture, 15 credits

*Tillämpad webbarkitektur, 15 högskolepoäng*

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<b>Course Code:</b> TAWK17	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Director of Education Feb 1, 2017	<b>Disciplinary domain:</b> Technology (95%) and social sciences (5%)
<b>Revised by:</b> Jun 25, 2018	<b>Subject group:</b> TE9
<b>Valid From:</b> Aug 1, 2018	<b>Specialised in:</b> G1F
<b>Version:</b> 2	<b>Main field of study:</b> Informatics

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### Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- be familiar with some common web application security issues.
- display an understanding for multitier architecture.
- display an understanding for the REST architectural style.
- demonstrate basic knowledge of data modelling and relational databases.
- demonstrate knowledge of the response- and request cycle on the internet.
- demonstrate knowledge of information design principles for hierarchical taxonomies.
- demonstrate knowledge and comprehension of systems integrations.

Skills and abilities

- demonstrate ability to develop basic web applications using server side programming and a relational database.
- demonstrate ability to use a version control system for collaboration on a web application project.
- demonstrate ability to install and configure a web server
- demonstrate skills in installing and configuring a content management system
- demonstrate skills in creating custom web templates for a content management system.

### Contents

The course introduces the concept of multitier architecture as a model to create flexible web applications. It continues by teaching the basics of programming with PHP and the fundamentals of relational databases including the SQL language. The first part of the course focuses on creating a database driven website with the use of a template based server side platform while applying prior knowledge of interface design and client programming. Furthermore, the course explains the principles of web servers and how they can be configured to meet the developer's needs and how external systems can be integrated to a solution, including the utilization of REST API's ending in a group project bringing a distributed version control system into service.

The course includes the following elements:

- Programming in PHP
- Relational databases and CRUD
- Wordpress and web templates
- Apache installation and configuration
- Working with RESTful web services.
- Working with GIT

### **Type of instruction**

The course consists of lectures, laboratory work and project work.

The teaching is conducted in English.

### **Prerequisites**

General entry requirements and completion of the course Client-side Programming, 15 hp (or the equivalent).

### **Examination and grades**

The course is graded 5,4,3 or Fail.

Final grading of the course is made by averaging the various test.

Registration of examination:

<b>Name of the Test</b>	<b>Value</b>	<b>Grading</b>
Written examination	5 credits	5/4/3/U
Laboratoy assignments	2.5 credits	5/4/3/U
Written and oral project presentation	5 credits	5/4/3/U
Assignments	2.5 credits	5/4/3/U

### **Course literature**

Literature

The litterature list for the course will be provided one month before the course starts.

Title: Head First PHP & MySQL, A Brain-Friendly Guide

Author: Beighley, L & Morrison, M

Publisher: O'Reilly Media

ISBN: 9780596800802

Wordpress. (2016, 12 19). Theme Handbook: <https://developer.wordpress.org/themes>